

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

SASO GOLF, INC.,)	
)	
Plaintiff,)	
)	No. 08-cv-01110
v.)	
)	Judge Andrea R. Wood
NIKE, INC.,)	
)	
Defendants.)	

ORDER

This Order addresses the remaining claim construction issue left open by prior rulings issued on November 1, 2010 [119] and September 9, 2013 [170]. For the reasons explained in the following Statement, the Court concludes that, given the prior constructions of the terms toe, heel, and back side profile shape, the description of the point from where the radius of curvature of the back side profile shape to the most rearward point should be measured, as provided in Claim 7 of U.S. Patent No. 5,645,495, is too indefinite to be valid. See the accompanying Statement for details.

STATEMENT

Plaintiff Saso Golf, Inc. (“Saso”) filed this lawsuit against Defendant Nike, Inc. (“Nike”) to enforce Claim 7 of U.S. Patent No. 5,645,495 (“the ‘495 Patent”). The ‘495 Patent describes a golf club design that purports to improve the distance and accuracy of golf shots by shifting the center of gravity of the club head away from the toe and toward the heel. In two prior claim construction rulings, the district judges previously assigned to this case have construed disputed terms in Claim 7. After the second of those rulings, one claim construction issue still remains outstanding. Specifically, as explained in the Memorandum Opinion and Order dated September 9, 2013 (“Claim Construction II”) (Dkt. No. 170), “the claim at issue tells the public to compare the radius of curvature of ‘the back side profile shape between the toe and a most rearwardly point’ and ‘the back side profile shape between the most rearwardly point and . . . the heel,” but “from where on the toe and the heel does one measure the back side profile shape to the most rearward point?” (Claim Construction II at 20.) This Court now resolves that question and in the process determines that the term “radius of curvature” in Claim 7 is too indefinite to be construed.

I.

The ‘495 Patent is for a metal wood club, described as follows:

A golf club comprising:

a metallic wood type head including a cylindrical hosel portion formed integrally therewith;

said metallic wood type head having a heel side and a toe side, said metallic wood type head having a hitting surface extending from the toe side to said heel side, the hitting surface having substantially the same curvature along a transverse direction as a longitudinal direction,

said metallic wood type head further comprising a toe, a heel, and a back side profile shape extending from the toe side to the heel side, said back side profile shape between the toe and a most rearwardly point of said metallic wood type head having a radius of curvature that is larger than the radius of curvature of said back side profile shape between the most rearwardly point of said metallic wood type head and the heel.

(‘495 Patent, Saso Exh. 1 at 13, Dkt. No. 124-1.) Saso’s patent application further describes the claimed invention as “modifying the head shape to decrease the volume of the head by a certain amount at the toe end on the rear side thereof and to increase the head volume at the shaft end on the rear side by an amount equal to the decreased amount.” (*Id.* at 2.)

Figure 1 below shows the first illustration included in Saso’s patent application.

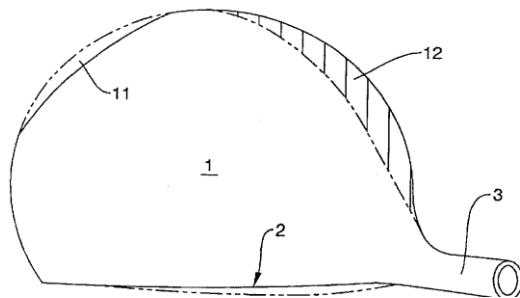


Fig. 1

(*Id.* at 3.) As shown in Figure 1, the relatively flat surface at No. 2 represents the hitting area, and the surface opposite the hitting area comprises the back side profile. The area at No. 11 represents the volume sliced from the toe side of the typical metal wood head, while the area at No. 12 shows the volume added to the heel side. The toe side and heel side are divided by a line perpendicular to the hitting surface and extending to the point on the rear club surface farthest away; that point is described in Claim 7 as the “most rearwardly point” of the club head. The reduction in volume at the toe side of the club head is intended to reduce the tendency toward counterclockwise rotation of the club head as it swings, thereby reducing the likelihood of hooked shots.

The language presently at issue describes the reduction of mass on the toe side of the club head and the increase on the heel side—specifically, the disputed claim states that “said back side profile shape between the toe and a most rearwardly point of said metallic wood type head having *a radius of curvature* that is larger than the radius of curvature of said back side profile shape between the most rearwardly point of said metallic wood type head and the heel.” (*Id.* at 13.) (emphasis added). The larger radius of curvature for the toe side of the back profile is intended to describe a flatter, shallower, and lower-mass shape than the smaller radius heel side.

II.

In the initial claim construction ruling, the district judge first assigned to this case found that the term “a radius of curvature,” as used in relation to the toe half of the back side profile, and “the radius of curvature,” as used in relation to the heel half of the back side profile, “necessarily imply *singular*, not plural items.” (November 1, 2010 Mem. Op. and Order (“Claim Construction I”) at 14, Dkt. No. 119.) The original presiding judge then further concluded that, “[t]he only way that the Court can make sense of the last paragraph of the Claim is to assume that the back side profile shape on both the heel side and the toe side are parts of circles, each having only one radius.” (*Id.*) Thus, the judge construed “radius of curvature” to mean “radius of a substantially circular curve of a substantial portion of the back side profile shape.” (*Id.* at 15.)

Both parties subsequently sought clarification of the initial claim construction ruling. Saso, for its part, requested confirmation that the terms “substantially circular” and “substantial portion” still allow the disputed claim to be construed as describing toe side and heel side shapes that are simple circles for large parts of their lengths—but not their entire lengths—thereby allowing shapes with complex curves and multiple radii to be included. (Nike’s allegedly infringing clubs have back side shapes with complex curves.) Nike, on the other hand, argued that the initial claim construction ruling necessarily requires each half of the back side to be part of a simple, single radius circle. Thus, according to Nike, its clubs do not infringe upon Saso’s patent because the back sides of Saso’s club heads have complex curves. In the alternative, Nike contended that Claim 7 is invalid because the lack of specificity about from where to measure the radii of the crucial club surfaces makes the claim impermissibly indefinite.

The then-presiding district judge granted the parties’ motions for clarification. In so doing, he abandoned the initial construction of the term “radius of curvature” as necessarily referring to a single radius—and thus a simple circle—for each section of the club head’s rear side profile. Instead, he found that the term is better understood by reference to the mathematical term commonly defined to include the average of the radii of a complex curve in addition to the single radius of a simple curve. (*See* Claim Construction II at 11–13.) Furthermore, the descriptions that define the area of the rear side profile, the distance between the toe and the most rearwardly point on one half, and the distance between the heel and the most rearwardly point on the other half, use the terms “toe” and “heel,” which are regions, not specific points. (*See id.* at 15.) As explained in Claim Construction II, “the radius of curvature of a complex curve necessarily requires taking an average of the radii of curvature along the complex curve.

Moreover, the relevant curve must be bounded by end points—otherwise, it would be impossible to determine where to stop measuring, and whether a golf club’s back side profile shape is infringing on the claimed invention.” (*Id.* at 14–15.)

That brings us to the present inquiry. At the conclusion of Claim Construction I, the previously-assigned judge directed the parties to submit position papers on the question of where on the toe and heel sides the end points for measurement of the toe and heel radii of curvature should be measured. Those position papers are now before this Court.

Notably, both the toe side curve and the heel side curve measurements have one defined end point: the most rearwardly point on the rear surface. Saso claims that the end point of the toe side should be the point on the toe region closest to the most rearwardly point, and that the end point of the heel side should be the point on that region closest to the most rearwardly point. The problem with that argument, however, is that nothing in the record suggests where the toe side and the heel side of the club head turn into the back side of the club head. Saso itself does not indicate where the edges of the toe side and heel side are located; instead, it asserts that, “[i]n the litigation context, the location of those edges of the toe and heel on the rear profile shape are issues of fact and may be subject to expert testimony.” (Saso Position Paper at 5, Dkt. No. 174.) But how a disputed claim should be construed to define the alleged invention is clearly a question of law to be decided at this stage of the proceedings. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995). If expert evidence were to be presented to support Saso’s proposed construction of the location of the toe and heel side edges, it should have been presented in connection with claim construction hearing.

With nothing suggesting where the toe side and heel side end points are located, it is not clear from where on each surface one measures to the most rearwardly point to determine the radii of curvature to compare against each other in accordance with the claim description of the Saso invention. For that reason, the Court concludes that the claim is too indefinite to be valid.

Dated: November 26, 2019

A handwritten signature in black ink, appearing to read "Andrea R. Wood", written over a horizontal line.

Andrea R. Wood
United States District Judge